

CHAPTER 4.1.2.

WHITE SPOT DISEASE

Article 4.1.2.1.

For the purposes of this *Aquatic Code*, the disease agent of white spot disease (WSD) is white spot syndrome virus (WSSV) in the genus *Whispovirus*. Synonyms commonly used in the scientific literature and official documents include: white spot virus (WSV), white spot bacilliform virus (WSBV), penaeid rod-shaped DNA virus (PRDV), and other names as listed in Chapter 4.1.2 of the *Aquatic Manual*

Article 4.1.2.2.

Susceptible species

- 1) For the purpose of this *Aquatic Code*, all decapod (Order Decapoda) crustaceans, whether from marine, brackish or freshwater sources, are potential hosts for WSD. WSD is potentially lethal to most commercially cultivated penaeid (Family Penaeidae) shrimps and prawns. Transfers of other decapod crustaceans from marine, brackish water or freshwater sources to white spot free zones should be subject to risk analysis when there is evidence from experimental challenge studies that one or more species in the importing country and exporting country is susceptible to white spot disease.

[The disease agent listed in Article 4.1.2.1] WSSV can cause [asymptomatic] *subclinical* infection in these [respective susceptible] species [listed in Article 4.1.2.2].

- 2) Experimental WSD infections have been reported in many decapod species in which natural infections have not been recorded.

[Article 4.1.2.3.

The disease agent listed in Article 4.1.2.1 can cause asymptomatic infection in their respective susceptible species listed in Article 4.1.2.2.

Article 4.1.2.4.

Experimental WSD infections have been reported in many decapod families where natural infections have not been reported.]

Article 4.1.2.[5]2

Suspect cases of natural infection with [the agent listed in Article 4.1.2.1] WSSV in species other than those [listed] referred to in Article[s] 4.1.2.2 [and Article 4.1.2.3] should be [referred] submitted immediately to the appropriate OIE Reference Laboratory, whether or not clinical signs are associated with the findings.

Article 4.1.2.[6]4.

Methods for surveillance, diagnosis and confirmatory identification of [f the disease agent] WSD are provided in the *Aquatic Manual*.

Article 4.1.2.[7]5.

WSD free country

A country may be [considered] officially declared free from WSD if it meets the conditions in [Articles 4.1.2.8, or 4.1.2.9] point 1) or 2) below.

If a country shares a water resource (coastal zone, gulf, inland farming area, etc.) with one or more other countries, it can only be declared a WSD free country if all the areas covered by the shared water resource are declared free *zones* (see Article[s] 4.1.2.10 to 4.1.2.12] 4.1.2.6).

[Article 4.1.2.8.]

- 1) A country where none of the species [listed] referred to in Article[s] 4.1.2.2 [and 4.1.2.3] is present or where susceptible species are present but there has never been any observed occurrence of the disease for at least the past 25 years despite conditions that are conducive to its clinical expression, as described in Chapter 4.1.2 of the Aquatic Manual, may be officially declared [considered] free from WSD when [prescribed biosecurity] basic security conditions have been in place continuously in the country for at least the previous 2 years and infection is not known to be established in wild populations. [as follows:
 - 1) WSD is compulsorily notifiable to the *Competent Authority*, including notification of suspicion; and
 - 2) an *early detection system* is in place within the country enabling the *Competent Authority* to undertake effective disease investigation and reporting, including access to laboratories capable of diagnosing and differentiating relevant diseases, and training of veterinarians or crustacean health specialists in detecting and reporting unusual disease occurrence; and
 - 3) infection is not known to be established in wild populations; and
 - 4) conditions applied to imports to prevent the introduction of WSD (e.g. with importation of live crustaceans for aquaculture purposes or *commodity* products intended for reprocessing prior to *marketing*, etc.) into the country are in place (see Section 1.4)]

[Article 4.1.2.9.]

OR

- 2) A country where the last known clinical occurrence was within the previous 25 years or the infection status prior to targeted surveillance was [previously] unknown, for example because of the absence of conditions conducive to clinical expression, as described in Chapter 4.1.2 of the Aquatic Manual, may be officially declared [considered] free from WSD when:
 - a) it meets [the prescribed biosecurity] *basic disease security conditions* [detailed in Article 4.1.2.8]; and
 - b) *targeted surveillance* as described in Chapters 1.4 and 4.1.2 of the *Aquatic Manual* has been in place for at least the past 2 years in *aquaculture establishments* holding any of the [susceptible] species [listed] referred to in Article[s] 4.1.2.2 [and 4.1.2.3] without detection of [the disease agent listed in Article 4.1.2.1] WSSV. If there are areas of the country in which there are no such *aquaculture establishments* but in which there are wild populations of any of the [susceptible] species [listed] referred to in Article[s] 4.1.2.2 [and 4.1.2.3], those populations must be included in the *targeted surveillance*

Article 4.1.2.[10] 6.

WSD free zone

A WSD free *zone* may be established and officially declared within the *territory* of one or more countries of infected or unknown status for WSD if the *zone* meets the conditions referred to in [Articles 4.1.2.11. or 4.1.2.12] point 1) or 2) below. Such WSD free *zones* must comprise: one or more distinct water resource (coastal zone, gulf, inland farming area, etc.). Such *zones* must be clearly delineated on a map of the *territory* of the country(ies) concerned by the *Competent Authority*.

If a *zone* extends over more than one country, it can only be declared a WSD free *zone* if the conditions outlined below apply to all [shared] areas of the *zone*.

[Article 4.1.2.11.]

- 1) In a country of unknown status for WSD, a *zone* where none of the species [listed] referred to in Article[s] 4.1.2.2 [and 4.1.2.3] is present or where susceptible species are present but there has not been any observed occurrence of the disease for at least the past 25 years despite conditions that are

conducive to its clinical expression, as described in Chapter 4.1.2 of the Aquatic Manual, may be officially declared [considered] free from WSD when [prescribed biosecurity] basic disease security conditions have been in place continuously in the *zone* for at least the previous 2 years [as follows:

- 1) WSD is compulsorily notifiable to the *Competent Authority*, including notification of suspicion; and
- 2) an *early detection system* is in place within the *zone* enabling the *Competent Authority* to undertake effective disease investigation and reporting, including access to laboratories capable of diagnosing and differentiating relevant diseases, and veterinarians or crustacean health specialists are trained in detecting and reporting unusual disease occurrence; and]

and infection is not known to be established in wild populations, and official control measures to prevent the introduction of WSD (e.g. with importation of live crustaceans for aquaculture purposes or *commodity* products intended for reprocessing prior to *marketing*, etc.) into the *zone* are in place.

[Article 4.1.2.12.]

OR

- 2) A *zone* where the last known clinical occurrence was within the previous 25 years or the infection status prior to targeted surveillance was [previously] unknown, for example because of the absence of conditions conducive to clinical expression, as described in Chapter 4.1.2 of the Aquatic Manual, may be officially declared [considered] free from WSD when:

- a) it meets [the prescribed biosecurity] basic disease security conditions [detailed in Article 4.1.2.11]; and
- b) *targeted surveillance* as described in Chapters 1.4 and 4.1.2 of the *Aquatic Manual* has been in place for at least the past 2 years in *aquaculture establishments* holding any of the [susceptible] species [listed] referred to in Article[s] 4.1.2.2 [and 4.1.2.3] without detection of [the disease agent listed in Article 4.1.2.1] WSSV. If there are areas of the *zone* in which there are no such *aquaculture establishments* but in which there are wild populations of any of the [susceptible] species [listed] referred to in Article[s] 4.1.2.2 [and 4.1.2.3], those populations must be included in the *targeted surveillance*

These provisions also apply if the *zone* to be officially declared free lies in a WSD-infected country.

[Article 4.1.2.13.]

WSD free aquaculture establishment

A WSD free *aquaculture establishment* may be located within a WSD infected country or zone or within a country or zone of unknown status with respect to WSD if it meets the conditions referred to in Articles 4.1.2.14 or 4.1.2.15. Such WSD free *aquaculture establishments* must be supplied by a contained water source (e.g. a well, borehole, closed recirculation system, etc.) in which the culture system water cannot be contaminated by the disease agent and is inaccessible to susceptible species or potential carriers from the natural environment.

Article 4.1.2.14.

An *aquaculture establishment* where none of the species listed in Articles 4.1.2.2 and 4.1.2.3 is present or where there has never been any observed occurrence of the disease despite conditions that are conducive to its clinical expression may be considered free from WSD when *prescribed biosecurity conditions* have been in place continuously in the *aquaculture establishment* for at least the previous 2 years as follows:

- 1) WSD is compulsorily notifiable to the *Competent Authority*, including notification of suspicion; and
- 2) the *aquaculture establishment* complies with an *early detection system* enabling the *Competent Authority* to undertake effective disease investigation and reporting, including access to laboratories capable of diagnosing and differentiating relevant diseases, and the staff are trained in detecting and reporting unusual disease occurrence; and
- 3) official control measures to prevent the introduction of WSD into the *aquaculture establishment* are in place.

Article 4.1.2.15.

An *aquaculture establishment* where the last known occurrence of WSD was within the previous 25 years or the infection status was previously unknown, for example because of the absence of conditions conducive to clinical expression, may be considered free from WSD when:

- 1) it meets the *prescribed biosecurity conditions* detailed in Article 4.1.2.14; and
- 2) *targeted surveillance* as described in chapters 1.4 and 4.1.2 in the *Aquatic Manual* has been in place for at least the past 2 years without detection of the disease agent listed in Article 4.1.2.1.]

Article 4.1.2.[16]7.

Maintenance of free status

A country or zone [or aquaculture establishment] that is [considered] *officially declared* free from WSD following the provisions of [Articles 4.1.2.8, 4.1.2.11 and 4.1.2.14] point 1) of Articles 4.1.2.5 or 4.1.2.6, respectively, may maintain its official status as WSD free provided that [the prescribed biosecurity] *basic disease security conditions* are continuously maintained.

A country or zone [or aquaculture establishment] that is [considered] *officially declared* free from WSD following the provisions of [Articles 4.1.2.9, 4.1.2.12 and 4.1.2.15] point 2) of Articles 4.1.2.5 or 4.1.2.6, respectively, may discontinue *targeted surveillance* and maintain its official status as WSD free provided that conditions that are conducive to clinical expression of WSD, as described in Chapter 4.1.2 of the *Aquatic Manual*, exist and [the prescribed biosecurity] *basic disease security conditions* are continuously maintained.

However, for *officially declared* free zones in infected countries and in all cases where conditions are not conducive to clinical expression of WSD, *targeted surveillance* will need to be continued, but at a level commensurate with the degree of risk assessed by the *Competent Authority*.

Article 4.1.2.[17]8.

Suspension and restoration of free status

If a *Competent Authority* has reason to believe that any of the conditions for [recognition of country, zone or aquaculture establishment freedom] *maintaining official status as WSD free country or zone freedom* has been breached, it should immediately suspend the free status, implement any necessary containment measures and conduct an investigation.

If the investigation confirms that the suspected breach has not taken place, free status may be restored.

If the investigation confirms that the suspected breach has taken place, suspension of free status is continued. The *Competent Authority* should carry out an epizootiological investigation to determine the likelihood of disease entry and establishment [and re-establish the conditions in Articles 4.1.2.7. to 4.1.2.9, 4.1.2.10. to 4.1.2.12, or 4.1.2.13. to 4.1.2.15 if free status is to be restored. Steps leading to re-establishment of free status may require depopulation, fallowing, disinfection and other measures as described in Section 1.6]. If this investigation concludes that disease entry and establishment have not occurred, free status may be officially restored.

If the investigation confirms a significant likelihood that disease entry and establishment have occurred, the *Competent Authority* must declare that the free status is lost. In order to restore free status, the conditions in Article 4.1.2.5 or 4.1.2.6 must be complied with again in full. Steps leading to re-establishment of free status may require depopulation, *fallowing, disinfection* and other measures as described in Section 1.6, as well as zoning as described in Section 1.4.

Article 4.1.2.[18]9.

When importing live *crustaceans* of [any life stage] the [susceptible] species referred to in Article 4.1.2.1, the *Competent Authority* of the *importing country* should require that the consignment be accompanied by an *international aquatic animal health certificate* issued by the *Competent Authority* of the *exporting country* or a *certifying official* approved by the *importing country*.

This *certificate* must certify, on the basis of [a surveillance scheme conducted according to the procedures described above and detailed in the Aquatic Manual] the procedures described in Articles 4.1.2.5 or 4.1.2.6 (as applicable), whether or not the place of production of the consignment is a country or *zone* [or aquaculture establishment] *officially declared* WSD free.

The certificate shall be in accordance with Model Certificate No. 4 given in Part 6 of this *Aquatic Code*

Article 4.1.2.[19]10.

If the *Competent Authority* of the *exporting country* does not provide the certificate referred to in Article 4.1.2.9, or cannot certify the place of production of the consignment as being free from WSD, the *importing country* should assess the risk[s] of introduction and establishment of WSSV associated with the importation of live *crustaceans* of [any life stage] the species referred in Article 4.1.2.2, from the *exporting country* or seek assurance from the *exporting country* that basic disease security conditions are met prior to a decision on whether to authorise an importation. This assessment should be made available to the exporting country.

Article 4.1.2.11.

When importing live *crustaceans* of species other than those referred to in Article 4.1.2.2, the *Competent Authority* of the *importing country* should assess the risk of introduction and establishment of WSD associated with the importation prior to a decision on whether to authorise the importation, taking into account, for example, whether there is evidence for or against the presence of WSSV in the place of origin. This assessment should be made available to the *exporting country*.

Article 4.1.2.[20]12.

When importing dead *crustaceans* of the species referred to in Article 4.1.2.2, the *Competent Authority* of the *importing country* should require that the consignment be accompanied by an *international aquatic animal health certificate* issued by the *Competent Authority* of the *exporting country* or a *certifying official* approved by the *importing country*.

This *certificate* must certify, on the basis of [a surveillance scheme conducted according to the procedures described above and detailed in the Aquatic Manual] the procedures described in Articles 4.1.2.5 or 4.1.2.6 (as applicable), whether or not the place of production is a *country* or *zone* [or aquaculture establishment] *officially declared* WSD free.

The certificate shall be in accordance with Model Certificate No. 5 given in Part 6 of this *Aquatic Code*

Article 4.1.2.[21]13.

If the *Competent Authority* of the *exporting country* does not provide the certificate referred to in Article 4.1.2.12, or cannot certify the place of production of the consignment as being free from WSD, the *importing country* should assess the risk[s] of introduction and establishment of WSSV associated with the importation from the *exporting country* of whole, or parts of, dead *crustaceans* of the species referred to in Article 4.1.2.2, including consideration of applying risk management measures, prior to a decision on whether to authorise an importation. This assessment should be made available to the exporting country.

Rather than refusing such imports, the *importing country* may opt to manage these risks, if the consignment is:

- 1) destined directly for human consumption without further processing, or
- 2) destined for processing in establishments with safe disposal of processing waste in a manner that ensures isolation from the local environment to avoid the potential introduction of [WSD] WSSV, or
- 3) has been treated, e.g. cooked, such that [white spot virus] WSSV is inactivated.

Article 4.1.2.[22]14.

The *Competent Authorities* of *exporting countries* should not authorise the exportation of live or dead *crustaceans* [of any life stage] from populations known to be infected with [WSD] WSSV without the [full] prior agreement of the *importing country*.
